
TEAL
SEAMLESS CONNECTIVITY FOR PHYSICAL AI, ANYWHERE IT GOES

YOUR CONNECTIVITY ISN'T AS RELIABLE AS YOU THINK

TRADITIONAL CONNECTIVITY IS BROKEN

Legacy cellular solutions lock you into rigid contracts, limited coverage, and costly SIM logistics. **slowing down your deployments and put uptime at risk.** Authentic global connectivity shouldn't be a gamble.

Here's what most teams struggle with today:

- Downtime when a carrier fails — and no automated failover.
- Single carrier lock-in with no easy way to switch networks.
- Coverage gaps across regions with inconsistent service outside your home market.
- Complex vendor and contract management managing dozens of partners to juggle.

That's why today's connected solutions need more than a SIM card, they need control, redundancy and global reach without compromise.

THERE'S A BETTER WAY!

Imagine connectivity that works like this:

- Automatically switches networks when needed
- Gives you one platform to manage carriers in 195 countries
- Removes carrier lock-in, contract hassles, and coverage blind spots
- Scales globally, effortlessly with no physical SIM swaps or truck rolls required

That's the promise of **Network Orchestration Service (NOS):**

Global Coverage + Intelligent Redundancy + Zero Lock-In

Why it matters:

- **eSIM is now FREE!**
- **Multi-Carrier Resilience:** Devices stay connected even if one network drops.
- **Unified Control:** One dashboard to monitor, manage, and switch between carriers in real time.
- **Freedom & Flexibility:** Bring your own carrier (BYOC) or SIM, or access TEAL's global footprints without vendor constraints.

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It's not just better connectivity. It's operational confidence for every mission-critical solution.

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Revolutionizing Cellular Connectivity: The Power of TEAL's Network Orchestration Service (NOS)

Connectivity is the backbone of our increasingly digital world, yet traditional cellular solutions often fail to meet the demands of today's interconnected businesses. Organizations face mounting challenges such as limited coverage options, complex carrier relationships, and restrictive contracts that hinder scalability and innovation. With cellular technology evolving rapidly, enterprises need more flexible, efficient solutions to stay competitive.

This is where network orchestration steps in. By integrating and managing diverse cellular networks in a seamless, centralized way, orchestration redefines what's possible for connectivity. It eliminates the complexities of siloed systems and empowers businesses with unparalleled agility, visibility, and control over their connections.

TEAL's Network Orchestration Service (NOS) is at the forefront of this revolution. Designed to transform the cellular landscape, NOS offers a comprehensive platform that simplifies connectivity management, bridges global networks, and gives businesses the freedom to pivot without disruption. This whitepaper explores how TEAL's NOS not only addresses the limitations of traditional systems but also provides a scalable, future-proof approach to connectivity.
As you read on, you'll discover how NOS is driving change across industries, delivering tangible benefits for businesses of all sizes. From solving current connectivity challenges to unlocking new opportunities, NOS is the solution that modern enterprises need to thrive in a digitally connected world.

Challenges in Cellular Connectivity

For businesses navigating an increasingly interconnected landscape, robust and reliable cellular connectivity is no longer a luxury, it's a necessity. Yet, traditional cellular systems often fall short of meeting modern organizational demands, presenting a series of persistent challenges that hinder efficiency, scalability, and agility. These limitations create significant barriers to organizations striving to remain competitive in a world where connectivity is critical. Below, we examine the core challenges inherent to traditional cellular solutions.

Limited Coverage Options

One of the most pressing issues facing cellular connectivity is restricted access to consistent, high-quality coverage across regions. Businesses operating globally often find themselves entangled in coverage gaps caused by the geographic limitations of individual carriers. While some regions may experience seamless service, remote or rural areas commonly remain underserved. Such limitations are particularly problematic for industries such as logistics, transportation, and agriculture that operate across vast and diverse landscapes where network consistency is crucial.

As the need for ubiquitous connectivity grows, traditional networks struggle to adapt, leaving organizations grappling with fragmented service that disrupts operations and impacts productivity.

Inflexible Carrier Relationships

The rigidity of carrier relationships poses another significant setback. Many businesses are locked into long-term contracts with individual telecom providers, forcing them to operate within predefined parameters that may not suit their evolving needs. The inability to switch providers without incurring hefty penalties constrains businesses to act with agility in response to market demands or regional needs.

Even when options for multi-network roaming are provided, organizations often face limitations on which carriers they can access and how extensively they can utilize these networks. This lack of flexibility adds complexity and stifles innovation in connectivity management.

Reliance on Physical SIM Cards

The physical SIM card, once a remarkable technological advancement, now represents an outdated limitation for businesses that prioritize agility and scalability. Traditional SIM cards tether devices to specific carriers and require manual installation, replacement, or removal when switching networks.

For industries deploying thousands of connected devices, this reliance on physical infrastructure complicates scaling efforts and creates logistical inefficiencies. It also results in significant downtime during network transitions which is a critical issue for IoT solutions and connected devices where even brief interruptions can disrupt essential operations.

Risks of Single Points of Failure

Traditional carrier-based systems often rely on centralized, monolithic network architectures, creating a vulnerability to single points of failure. If a specific carrier network experiences disruptions due to outages, equipment failures, or cyberattacks, businesses reliant on that sole provider are left exposed to widespread connectivity interruptions.

This fragility not only jeopardizes business continuity but also has far-reaching consequences in industries such as healthcare, emergency services, and utilities, where uninterrupted connectivity can directly impact human lives.

Catalyzing the Need for Innovation

These persistent challenges underscore the fundamental shortcomings of traditional cellular connectivity models and the critical need for innovative solutions. Businesses increasingly require dynamic, adaptive systems that remove the rigidity and operational inefficiencies of legacy methods. It's no longer feasible to depend on fragmented service, inflexible contracts, and vulnerable infrastructure within a business environment that demands constant availability and global reach.

This pressing need for change sets the stage for solutions like TEAL's Network Orchestration Service (NOS) to revolutionize cellular connectivity - offering a flexible, scalable, and resilient approach designed to meet the demands of modern enterprises.

The TEAL NOS Solution

TEAL's Network Orchestration Service (NOS) is the game-changer businesses need to overcome the entrenched challenges of traditional cellular connectivity. Built to provide unmatched flexibility, scalability, and control, TEAL's NOS is a comprehensive platform that bridges the gap between fragmented networks and the need for seamless, global connections. With its innovative approach and cutting-edge features, NOS empowers businesses to redefine how they manage connectivity.

Flexible and Adaptive Connectivity

At the core of TEAL's NOS is its adaptability to evolving business needs. Unlike traditional systems that lock organizations into rigid carrier relationships, NOS provides the freedom to access multiple networks on demand. Enterprises can dynamically switch between carriers to ensure optimal coverage and cost efficiency, removing the barriers imposed by single-provider reliance. Whether operating regionally or globally, businesses can trust NOS to deliver consistent and reliable connectivity without compromise.

Scalability That Grows with Your Business

One of the standout features of NOS is its inherent scalability. Traditional cellular systems struggle to support businesses undergoing rapid expansion, often requiring costly infrastructure upgrades and manual interventions. TEAL's NOS leverages a cloud-based architecture that allows organizations to scale their connectivity effortlessly. The platform can accommodate millions of devices across diverse locations, ensuring that growth is never hindered by operational bottlenecks.

The Power of eSIM Technology

TEAL's NOS harnesses eSIM technology to revolutionize the way businesses interact with cellular networks. These programmable eSIMs eliminate the physical constraints of traditional SIM cards, allowing organizations to switch carriers and profiles remotely and seamlessly via TEAL's Aurora dashboard. This capability reduces downtime, simplifies device management, and boosts agility - an essential feature for industries leveraging IoT solutions, where devices often operate in remote or inaccessible locations.

Through it's US-built and wholly owned eSIM technology, TEAL empowers businesses to deploy their connectivity strategies without worrying about logistical hurdles, saving both time and resources while enhancing operational efficiency.

Centralized Control for Optimized Management

Managing connectivity has never been simpler with NOS's centralized control panel - Aurora. The platform provides an intuitive interface to monitor, manage, and optimize networks in real time. Businesses gain comprehensive visibility into their devices, including performance metrics, usage insights, and carrier performance. This centralized control reduces operational complexity and ensures that connectivity strategies align with business objectives.

By integrating multiple carriers and providing a unified view of connectivity, TEAL's NOS eliminates the silos that traditionally hinder effective management. This comprehensive oversight enables smarter decision-making and enhances the overall agility of businesses.

Transformative Business Impact

TEAL's NOS isn't just a solution—it's a strategic advantage. By addressing the limitations of traditional cellular systems, NOS empowers organizations to unlock a new era of connectivity. The platform's emphasis on flexibility, scalability, eSIM technology, and centralized control allows businesses to minimize costs, maximize uptime, and secure a competitive edge in their industries.

For IoT-centric businesses or enterprises with global operations, NOS ensures consistent connectivity that adapts to both present and future demands. The seamless integration of networks across geographic borders fosters innovation, accelerates growth, and transforms connectivity into a reliable backbone for modern operations.

Leading the Connectivity Revolution

TEAL's Network Orchestration Service is more than a technological innovation—it's a blueprint for the future of cellular connectivity. By eliminating the pain points of traditional systems and introducing powerful, adaptive features, TEAL's NOS is paving the way for businesses to thrive in an increasingly connected world. Whether navigating the complexities of IoT deployments or expanding global operations, TEAL has positioned NOS as the solution for businesses seeking simplified, scalable, and transformative connectivity management. With more network operator agreements than any other connectivity platform, TEAL ensures native, global connectivity across 196 countries.

Key Features and Benefits of TEAL's Network Orchestration Service (NOS)

TEAL's Network Orchestration Service (NOS) redefines how businesses manage and optimize cellular connectivity. Designed to eliminate the limitations of traditional systems, NOS combines advanced technological features with a user-first approach, ensuring adaptability, reliability, and efficiency. Below, we explore the standout features of NOS and the tangible benefits they deliver to businesses.

Dynamic Network Switching

TEAL's NOS enables seamless network transitions by dynamically switching between carriers in 196 countries. This ensures businesses can maintain uninterrupted connectivity, even in regions where coverage may fluctuate. With the power to prioritize networks based on performance, location, or cost, organizations can optimize operations in real time.

Benefits:

- Reliability: Minimize downtime with uninterrupted service across diverse environments.
- Cost Optimization: Leverage competitive carrier rates for significant savings.
- Operational Agility: Adapt instantly to changing connectivity conditions.

eSIM Integration for Unmatched Flexibility

By integrating eSIM technology, NOS removes the physical constraints of traditional SIM cards. This allows businesses to manage carrier profiles remotely, eliminating the need for manual swaps or onsite interventions.

Benefits:

- Efficient Deployment: Simplify the setup of massive IoT device networks.
- Scalability: Seamlessly onboard devices regardless of volume or location.
- Global Coverage: Access native profiles across a broad network ecosystem without regional limitations.

Centralized Management and Control

The NOS platform provides a single interface to manage all connectivity-related operations. Its intuitive Aurora dashboard offers real-time visibility into device performance, data usage, and carrier agreements.

Benefits:

- Simplified Oversight: Streamline operations with an all-encompassing view of connectivity metrics.
- Improved Decision-Making: Use actionable insights to optimize network performance.
- Time Savings: Reduce the administrative burden of manual network management.

Scalability for Diverse Business Needs

Whether a business operates regionally or globally, NOS is designed to scale effortlessly. Its cloud-based architecture supports the expansion of operations without the need for physical infrastructure upgrades.

Benefits:

- Future-Readiness: Grow connectivity alongside business demands.
- Global Reach: Deploy and manage devices anywhere in the world with ease.
- Cost Efficiency: Scale operations while keeping connectivity expenses predictable.

Cost Efficiency Without Compromise

Cost flexibility is a core principle of TEAL's NOS. By consolidating multi-carrier relationships and providing granular control over connectivity settings, the platform empowers businesses to maximize value.

Benefits:

- Budget Control: Tailor connectivity plans to actual usage patterns.
- Carrier Independence: Avoid high costs associated with being locked into exclusive contracts.
- Maximized ROI: Drive higher productivity with reduced overhead.

Delivering Value Across Industries

TEAL's NOS is a versatile tool built to address industry-specific challenges. From IoT deployments in manufacturing to ensuring consistent data transmission in healthcare, NOS offers tailored benefits for a wide range of applications.

Benefits:

- Enhanced Security for sensitive data transmissions.
- Reliable Uptime for mission-critical operations.
- Versatility to accommodate varied use cases.

Driving Business Transformation

TEAL's Network Orchestration Service is more than just a connectivity solution—it is a catalyst for innovation, resilience, and growth. By streamlining how businesses manage networks, reducing costs, and improving global reach, NOS empowers organizations to focus on their core goals without worrying about connectivity challenges.

By investing in TEAL's NOS, businesses gain not merely a service, but a competitive advantage in an increasingly connected and fast-paced digital landscape.

Use Cases and Applications for TEAL's Network Orchestration Service (NOS)

TEAL's Network Orchestration Service (NOS) is purpose-built for hardware OEMs seeking advanced eSIM management and seamless compatibility with built-in SGP.32 eSIM/iSIM, as well as for network operators developing next-generation eSIM solutions for customers who prioritize open platforms. Designed with future-proof flexibility, NOS will continue to support the latest SGP.32-compatible products, ensuring ongoing value as industry standards evolve. This flexible platform empowers hardware OEMs, operators, and enterprises with true cellular networking freedom, covering the needs of second-generation eSIM solutions and Bring Your Own SIM (BYOS) and Bring Your Own Carrier (BYOC) customers with confidence.

Below, we spotlight how NOS is transforming connectivity across key verticals and real-world use cases:

Fleet Management and Telematics

Managing large fleets requires dependable, wide-reaching connectivity that can adapt as vehicles move across regions and carriers. NOS enables centralized management and dynamic network switching, helping fleet operators maintain real-time location data, video telematics, and diagnostics regardless of geography. Built-in support for SGP.32 eSIM/iSIM means devices can be deployed globally with remote carrier management—significantly reducing operational overhead and downtime.

Customer Insight:

Leading companies like Geotab are leveraging NOS to maintain persistent connectivity for thousands of vehicles crossing international borders. The result: seamless reporting for vehicle health and timely delivery data, improving customer satisfaction and reducing support costs.

Autonomous Robots and Drones (Autonomous Systems)

Autonomous systems rely on robust, uninterrupted cellular connections for safe navigation and data exchange. NOS delivers the resilience autonomous robots and drones need by providing real-time carrier switching and secure global coverage, all managed from a single pane of glass. With support for SGP.32 eSIM/iSIM, OEMs can confidently deploy fleets of autonomous devices worldwide, with the agility needed to adapt profiles and carriers as demands change.

Practical Benefit:

Starship Technologies uses NOS to deploy its service robots in multiple cities, each with local cellular requirements and carrier preferences. With NOS, carrier profiles are updated remotely, ensuring compliance and coverage while reducing onsite intervention.

Video Surveillance Solutions

Modern video surveillance depends on constant, high-bandwidth connectivity to transmit footage securely and in real time, often from remote or mobile environments. NOS simplifies deployment by enabling seamless management of cameras and devices—each equipped with eSIM/iSIM technology—across different carriers without physical SIM swaps. This gives surveillance providers the freedom to deploy anywhere, switch networks based on performance or cost, and guarantee uninterrupted service.

Customer Story:

A leading remote security provider rolled out video surveillance units in both urban and rural locations, using NOS to optimize network selection for bandwidth and reliability. Centralized monitoring and remote management minimized on-site service calls and ensured critical footage always reached central command.

EV Charging Infrastructure

Charging station operators must ensure reliable cellular connectivity for payment processing, monitoring, and software updates—often in remote or hard-to-reach sites. NOS empowers EV charging infrastructure vendors to roll out scalable networks of charging stations with embedded SGP.32 eSIM/iSIM. This approach supports real-time network switching, remote diagnostics, and continuous uptime, providing drivers and operators with a reliable user experience.

Key Advantage:

EV+ and other leading charging station companies have deployed NOS to streamline remote connectivity management and scale station deployment quickly. The result: lower installation and maintenance costs, rapid onboarding of new locations, and improved uptime metrics for end-users.

Supporting Network Operators and Open Platforms

For network operators building next-generation eSIM offerings, NOS stands out with its open-platform compatibility and ongoing support for SGP.32 standards. Operators can deliver flexible, customer-driven connectivity solutions that enable BYOS and BYOC models, all while retaining centralized visibility and management.

Why It Matters:

Operators use NOS to enhance their service portfolio for enterprise customers, supporting complex requirements like multi-carrier and multi-profile setups, while ensuring the platform evolves with future network and device standards.

Enabling BYOS and BYOC for Cellular Networking Freedom

NOS is engineered to give organizations and OEMs the ability to select carriers and manage SIM strategies on their own terms. Whether a business seeks to leverage existing mobile contracts or offer a BYOC model to its customers, NOS removes restrictions, ensuring full autonomy, reduced costs, and simplified network operations.

NOS is redefining what it means to achieve agile, scalable, and future-ready cellular connectivity. From fleet and telematics to next-gen autonomous robots, video surveillance networks, and resilient EV infrastructure, TEAL's Network Orchestration Service delivers the open, adaptable, and robust platform our customers rely on to innovate and grow.

Learn more about how TEAL is helping leading customers across various sectors here:
www.tealcom.io/case-studies

Conclusion

TEAL's Network Orchestration Service (NOS) represents a pivotal advancement in cellular connectivity, addressing the entrenched challenges of traditional systems with a combination of flexibility, scalability, and cutting-edge technology. By leveraging dynamic network switching, seamless eSIM integration, centralized management, and a robust cloud-based infrastructure, NOS empowers businesses across industries to break free from the constraints of rigid carrier relationships, limited coverage, and outdated infrastructure.

The unique design of NOS accommodates hardware OEMs seeking advanced eSIM management compatible with SGP.32 eSIM/iSIM standards, as well as network operators developing next-generation eSIM solutions with open platforms. This forward-thinking approach positions NOS as a flexible, future-proof solution for industries ranging from fleet management and autonomous robotics to video surveillance and EV charging infrastructure. By enabling true cellular networking freedom and adapting to the evolving demands of BYOS and BYOC customers, TEAL's NOS delivers unmatched operational control, cost efficiency, and reliability.

The path forward for connectivity is undeniably one of integration, flexibility, and innovation. TEAL is at the forefront of this transformation, redefining how businesses connect, scale, and thrive in a digital-first world. By investing in proven technologies like TEAL's NOS, organizations can build a resilient foundation for success while navigating the complexities of modern connectivity. Together with TEAL, businesses can look ahead to a future where seamless, intelligent, and borderless connectivity fuels limitless potential.

Take the Next Step in Connectivity Innovation

Are you ready to transform your connectivity strategy and unlock the true potential of cellular freedom? TEAL's Network Orchestration Service (NOS) provides the tools, flexibility, and control your business needs to thrive in an increasingly connected world. With NOS, you can overcome the challenges of traditional cellular systems, scale your operations effortlessly, and future-proof your connectivity solutions.

TEAL's NOS is more than a service, it's a pathway to operational excellence. Whether you're a hardware OEM looking for advanced eSIM management, a network operator developing next-gen eSIM solutions, or a business seeking seamless global connectivity, NOS empowers you to innovate without limits.

Here's how you can take action today:

1 Explore NOS and Learn More

Dive deeper into the advanced features and unmatched benefits of TEAL's NOS. Discover how this revolutionary platform adapts to your business needs, from SGP.32 eSIM compatibility to enabling Bring-Your-Own-SIM (BYOS) and Bring-Your-Own-Carrier (BYOC) solutions.

- Visit our website for an in-depth overview of NOS features at Teal.io
- Access case studies to see how NOS is driving transformation across industries at: Tealcom.io/case-studies

2 Schedule a Personalized Demo

See TEAL's NOS in action! Book a demonstration tailored to your specific challenges and objectives. Experience firsthand how this innovative service can streamline your connectivity management, simplify operations, and deliver measurable results.

- Gain insights from a live walkthrough of the platform.
- Explore custom solutions created with your business in mind.
- Book a meeting at: Tealcom.io/schedule-meeting

3 Contact Our Experts

Have questions? Our team of connectivity experts is here to help. Whether you need detailed information, technical guidance, or strategic advice, we're ready to work with you to design a solution that aligns perfectly with your goals.

- Email Us at **info@tealcommunications.com**
- Schedule a free consultation at: tealcom.io/schedule-meeting
- Chat with Us live on our website for immediate assistance at Teal.io

Why Wait? Start Your Connectivity Revolution Today

By partnering with TEAL, you're not just adopting a service, you're positioning your business at the forefront of connectivity innovation. Don't settle for outdated solutions that limit your potential. Take charge of your networks and join the businesses already redefining what's possible with TEAL's NOS.

Act now. Elevate your connectivity. Contact TEAL today!

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TEAL

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